

INTRODUCTION

The Statewide Trails Vision is a basis for trail implementation in Iowa. The ultimate goal is to connect communities, parks, natural resources, shopping, employment, and other amenities with a comprehensive, multi-modal, easily accessible trails system. Whereas *Iowa Trails 2000* serves as a resource document for further trails planning and implementation and does not prioritize specific corridors, the statewide trails vision offers a framework for subsequent trails plans.

All trails implemented in Iowa - by state agencies, cities, local groups, or county conservation boards, or others - are a part of the statewide trails vision. The corridors shown on the statewide vision map (Figure 3-2) are those that offer connections across the state, to other states, or from region to region.

INVENTORY

A comprehensive statewide inventory formed the basis for the statewide trails vision. This inventory of existing and proposed trails, transportation infrastructure, natural resources, and other features was collected from a variety of sources, including state agencies, local governments, and direct contact with the public.

— **PROCESS**

At the beginning of the *Iowa Trails 2000* process, all 18 of the Regional Planning Affiliations (RPAs) and the eight Metropolitan Planning Organizations (MPOs) in the state were contacted for initial inventory of existing and proposed trails. All of the RPAs and MPOs either had trails data on hand for their regions of the state, or were able to secure data during the inventory process.



After collecting trails information from the RPAs and MPOs, other critical inventory data was collected. Additional data included the following items:

- ◆ County boundaries
- ◆ Communities (cities & towns)
- ◆ National Millennium Trail corridors
- ◆ Highways (both federal and state)
- ◆ Vegetation
- ◆ Rivers & streams
- ◆ Lakes
- ◆ Levees
- ◆ Existing, abandoned, and potentially abandoned rail lines
- ◆ Canoe access points
- ◆ Cultural sites
- ◆ Historic sites
- ◆ Museum sites
- ◆ Recreation sites
- ◆ DNR lands (all delineations)
- ◆ Connections to adjacent states
- ◆ Potential Off-Highway Vehicle sites
- ◆ Archaeological sites

Inventory data was collected and inserted into a geographic information system (GIS). Using this type of computer software, inventory data can be viewed as a series of overlays on top of one another. From the patterns created by combining and overlaying inventory data, conceptual corridors began to emerge.

After inventory data was collected, preliminary mapping was presented at public open houses throughout the state. These open houses were held during November, 1999, in five locations:

- ◆ Ottumwa
- ◆ Waverly
- ◆ Atlantic
- ◆ Des Moines (Clive)
- ◆ Cherokee

The goals of the open houses were to provide information on the *Iowa Trails 2000* process, solicit initial public input and feedback, listen to suggestions, and answer questions that arose about the document. The three major issues covered were:

- ◆ Trail location criteria
- ◆ Potential corridor locations
- ◆ User expectations

After completion of the open house workshops, data was gathered and results were tabulated. (An open house summary is included in Appendix B.)

In addition to public involvement through open houses, newsletters, and the *Iowa Trails 2000* Website, the Project Management Team (PMT) and Technical Advisory Committee (TAC) met approximately every four weeks throughout the project. At these meetings, representatives from various state agencies and trail advocacy groups discussed the inventory maps, the evaluation criteria, and the statewide trails vision (see “Process” in Chapter 1, beginning on page 1-3).



— **SOURCES**

The inventory assembled for *Iowa Trails 2000* contains detailed transportation corridor data, natural resource corridor data, and other special location resource data. All of this information has helped the PMT and the TAC make educated decisions on corridor locations and opportunities. Data was gathered from a number of sources including the following:

- ◆ Iowa Department of Transportation
- ◆ Iowa Department of Natural Resources
- ◆ Iowa Department of Economic Development
- ◆ Iowa Natural Heritage Foundation
- ◆ Iowa Office of the State Archaeologist
- ◆ Iowa State University GIS Support and Research Facility
- ◆ University of Iowa
- ◆ Regional Planning Affiliations (18 regions)
- ◆ Metropolitan Planning Organizations (8 areas)
- ◆ County conservation boards
- ◆ Iowa Trails Council
- ◆ Environmental Systems Research Institute (ESRI)
- ◆ Iowa Cooperative Soil Survey
- ◆ Iowa Geological Survey Bureau
- ◆ U.S. Census Tiger Data
- ◆ Special-interest groups, trail advocacy groups, and individuals

A majority of the inventory information was provided by the Iowa Department of Natural Resources Natural Resource Geographic Information System Library (NRGIS Library). The major focus of the

Iowa DNR inventory data was on natural resources (rivers, vegetation, etc.). Transportation data came from the Iowa Department of Transportation (highways, roads, railroads, etc.). The Iowa Department of Economic Development Tourism Division provided information for special sites (cultural, historic, museum and recreation sites).

—**INVENTORY MAPS**

Based on information offered by the above sources, inventory maps were created for the entire state. Figure 3-1 is a composite map with statewide coverage. For more detail, region-by-region maps are included in Appendix A.

ANALYSIS

Upon completion of the statewide inventory, the *Iowa Trails 2000* process began to determine where potential trail corridors might be located as part of the statewide trails vision. The establishment of specific trail location criteria, along with statewide inventory information, guided the delineation of possible trail corridors.

—**PROCESS**

Based on current funding criteria and input from various state agencies and trail groups, the PMT and TAC began to create a list of possible corridor location criteria. This list was a critical aspect of the preliminary mapping taken to the public open houses in November of 1999.



The public open houses sought to gain input from the public on the preliminary work of the PMT and TAC. Participants were urged to review the list of corridor location criteria and comment on it. A total of 275 participants attended the five open houses. A summary of comments/input from the participants regarding trail location criteria is included in Appendix B.

— ***TRAIL LOCATION CRITERIA***

The trail location criteria that had been listed by the PMT and TAC were generally supported by open house attendees. These criteria, along with the public's input, formed the basis for the creation of the statewide trails vision map. Corridor location criteria were grouped into several categories in the hope that proposed trail corridors would provide a great variety of amenities, thereby ensuring quality trail projects throughout the state. The following is a complete listing of the corridor location criteria.

NATURAL LANDSCAPES

- ◆ Diverse landscape types
- ◆ Proximity to water
- ◆ Low impact
- ◆ Scenic beauty
- ◆ Wildlife viewing potential
- ◆ Ecosystem restoration opportunities

DESIGN ISSUES

- ◆ Topographic characteristics
- ◆ Safety

Figure 3-1

11 x 17



Figure 3-1

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SERVICES

- ◆ Historic and cultural resources
- ◆ Resorts and campgrounds
- ◆ Local trail linkages
- ◆ Existing support facilities (gas, food, etc)
- ◆ State/regional park facilities
- ◆ Interpretation

LAND USE

- ◆ Sensitivity to agricultural uses
- ◆ Use of public land
- ◆ Proximity to population centers
- ◆ Existing transportation corridors

CORRIDOR CHARACTERISTICS

- ◆ Continuity
- ◆ Multiple uses within corridor
- ◆ Cross-state corridors
- ◆ Interstate links
- ◆ Logical termini
- ◆ Use of existing trails
- ◆ Transportation or commuting potential
- ◆ American Discovery Trail route or other national trail

USER NEED

- ◆ State Comprehensive Outdoor Recreation Plan (SCORP)
- ◆ Grassroots support



FINANCIAL/IMPLEMENTATION CONSIDERATIONS

- ◆ Acquisition and construction cost
- ◆ Maintenance feasibility and cost
- ◆ Potential for economic development
- ◆ Applicability for federal or other funding
- ◆ Availability of right-of-way
- ◆ Opportunity for multi-agency cooperation

STATEWIDE TRAILS VISION MAP

The Statewide Trails Vision Map shows a network of possible corridors of regional, state, or national significance. As discussed in the introduction to this chapter, this system does not necessarily encompass all existing or proposed trails within Iowa. Instead it sets forth a basis for subsequent trails planning by state agencies, regional governments, and local groups.

— *PROCESS*

The Statewide Trails Vision Map was developed based on extensive inventory and analysis as described in previous sections of this chapter. After the collection of inventory data, the analysis of that data, and the establishment of trail corridor location evaluation criteria, the vision map was developed.

The vision map was reviewed by the PMT and the TAC and by the general public at 10 open houses held in July and August of 2000.

— ***VISION MAP***

The Statewide Trails Vision Map (see Figure 3-2) depicts a possible statewide network of corridors within Iowa. The corridors shown on the map are intended to be general in nature and do not detail specific alignments. Alignments, trail use, trail surface, and other detailed design issues are determined by the agency or group that implements the trail, and by subsequent planning efforts.

Numerous other trails exist or are proposed in Iowa, including more than 650 miles within DNR facilities. These trails are not shown on the Statewide Trails Vision Map but they do form an important component of the overall statewide trails vision. The Statewide Trails Vision Map focuses on trails that offer connections across the state, from region to region, between major population centers, and across state boundaries. Such a wide-ranging, interconnected system offers significant possibilities for trail-based recreation.

Local connections, however, are very important. These local trails will serve as feeder or access corridors to longer, cross-state corridors. A trail is not precluded from state trails funding if it is not shown on the Statewide Trails Vision Map.

— ***ELEMENTS OF THE STATEWIDE TRAILS VISION***

“CONCEPTUAL CORRIDORS”

As discussed above, the routes depicted on the vision map denote conceptual trail corridors. The purpose of this is to allow trail implementers some flexibility in trail location and design while still ensuring the connectivity of the statewide trails vision. The conceptual



corridors offer recommended connection points (city-to-city) and possible routes (riverways, railroad corridors, highway corridors, etc.) based on the statewide inventory included in the *Iowa Trails 2000* process. Alternate routes, however, may become available in the same general vicinity. Detailed study may determine parallel routes to be safer or more conducive to trail construction. For these reasons, *Iowa Trails 2000* allows for flexibility in trail design through the delineation of conceptual corridors instead of trail alignments.

COVERAGE

The vision map shows at least one conceptual corridor in every county in Iowa. The desire for this extensive coverage was expressed by the public in open houses and by state agencies and trails groups in PMT and TAC meetings.

TRAIL MILEAGE

The *Iowa Trails 2000* Statewide Trails Vision Map proposes 4,908 miles of trails, approximately 517 miles of which are existing. This trail mileage is a considerable increase over the 3,000 miles of trails that were set forth in the 1990 plan. Desire for additional connections, coverage of every county in Iowa, increased state and federal funding for trail projects, and increased desire by residents for trails justify the increase.

Figure 3-2

11 x 17



Figure 3-2

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GREENWAYS

A greenway is a corridor of protected open space that is managed for conservation and/or recreation. Greenways typically refer to a linear corridor roughly following a preserved or restored native ecosystem. Greenways may follow natural land or water features, like rivers or ridgelines, or human landscape features like former railroad corridors or highway corridors.

Greenways link natural areas, parks, and cultural or historic sites with each other and, in some cases, with populated areas. Greenways can protect environmentally sensitive lands and wildlife, and can also provide people with access to outdoor recreation and enjoyment close to home.

— *FUNCTIONS OF GREENWAYS*

The location and arrangement of greenways can have a significant effect on how a landscape functions, possibly having an effect on nutrient cycling, energy flow, and the movement of materials and organisms. Width, connectivity, and quality are the three most important factors that affect greenway functioning.

- ◆ **WIDTH** refers to the physical dimension of the corridor. Wider corridors are exposed less to physical, human, and biological intrusions.
- ◆ **CONNECTIVITY** is determined by the number and severity of breaks, such as roads, along a given stretch of corridor. Well-connected greenways allow for better seed transport and animal migration.



- ◆ **QUALITY** is determined by the type and diversity of vegetation found in the greenway corridor. High-quality greenways host high species diversity.

The concepts of landscape ecology are important when considering the design and location of greenways. The practice of enhancing ecological integrity in the midst of human-modified landscapes is a key principle of landscape ecology. Ecological integrity is characterized by several factors, including:

- ◆ A high level of native, biological diversity.
- ◆ Natural rates of soil erosion.
- ◆ Clean water and healthy aquatic communities.

The functioning of greenways within the larger context of the landscape can influence the overall ecological integrity of a region.

GREENWAYS AS HABITAT

A species' habitat may include many different types of vegetation and geography, such as wetlands, upland forests, and fields. A greenway's ability to provide habitat will depend upon its size, location, and the needs of native species.

GREENWAYS AS CONDUITS

Conduits are areas in the landscape along which water, animals, plants, and people move. A river is among the most obvious examples of a conduit. Water carries sediment, nutrients, leaves, insects, bacteria, and plankton. Acting as a conduit to connect otherwise isolated parts of the landscape is an important function of greenways.

GREENWAYS AS BARRIERS

While a greenway may be a conduit to some things, it presents a barrier to others. Again, a river serves as an example. Small animals, such as mice, may be unable to cross a river. Even very narrow corridors, such as hedgerows, can present a physical barrier of impassable habitat for some species.

GREENWAYS AS FILTERS

A filter prevents the passage of some things but allows the passage of others. Filtering can occur in a greenway either perpendicular to its axis or along its length. Large animals, able to traverse a river, for example, can pass across a riparian greenway, but small ones may not. Greenways also have potential to filter sediments and nutrients from the surface and groundwater. They may also act as scenic buffers between one human land use and another.

GREENWAYS AS SOURCE

A greenway may act as a source, providing surrounding land with a variety of elements. A riparian greenway may be the only source of water in an otherwise dry landscape. In human-dominated areas, even narrow strips of relatively undisturbed land, such as hedgerows or steep slopes, may be a source of seeds of either native or non-native species.

GREENWAYS AS SINKS

A greenway acts as an ecological sink when something moves into it but does not travel back out into the surrounding land. Perhaps the most significant way a greenway can be a sink is by trapping sediments and nutrients carried in surface and groundwater. This



function is, however, dependent on a specific time frame because sediments may eventually wash downstream during a dramatic flood, or nutrients absorbed by vegetation will re-enter the soil and the atmosphere when the plant decays.

— ***THE BENEFITS OF GREENWAYS***

The mention of a greenway evokes images of special places, tree-lined rivers, tranquil open spaces, and winding pathways. For urban dwellers, greenways are oases, helping to moderate the rush and noise of cars and people. In suburbs, greenways promise undisturbed pathways for hiking, bicycling, and canoeing. Rural greenways conserve local ecosystems, offer migration routes for wildlife, protect archaeological sites, and maintain places where people can experience the beauty and complexity of nature. Greenways give communities a way to define and preserve some of their most precious natural, cultural, and historic resources.

The benefits of greenways range from ecological to economic and social. By helping conserve native ecosystems and landscape, greenways can be an important component of a statewide, regional, or local conservation strategy. Water and land pathways along greenways can expand tourism and associated businesses, provide recreational opportunities for residents and visitors, and offer the opportunity to enjoy Iowa's natural environment.

CONSERVATION OF NATIVE ECOSYSTEMS

Greenways help conserve native ecosystems and landscape by maintaining space that sustains the biodiversity of native plant and animal communities; maintaining connections that allow interchange

between native plant and animal communities; and maintaining the health of native ecosystems and landscapes by sustaining their physical, chemical, and biological processes.

Interconnected native ecosystems provide a number of other important services. They filter pollutants from the air, water, and soil; aid in cooling streams and soils through shading; protect and enhance the water quality of streams and lakes; recharge groundwater aquifers; and buffer development areas from floodwaters, saving lives and property.

ECONOMIC BENEFITS

Many communities have found that greenways offer opportunities to support economic growth without sacrificing environmental assets. Positive economic effects of greenways accrue in several ways. First, taxable properties that are adjacent to greenways often increase in value and generate greater overall revenue for the community. Homes located near greenways and trails commonly sell for more than similar homes in other areas. Recent trends also show that businesses tend to locate where quality of life indicators are high.

CONSERVATION OF HISTORICAL AND CULTURAL RESOURCES

Archaeological and historical sites can be protected, preserved, interpreted, and connected by greenways. Archaeological and historical sites provide yet another dimension to link people to landscape. They can provide a sense of place as well as a sense of origin.



PUBLIC RECREATION CLOSE TO HOME

A system of greenways provides many opportunities for public outdoor recreation and wellness activities. Trails can provide places for visitor and resident bicyclists, hikers, walkers, joggers, in-line skaters, and physically challenged people to exercise and experience the many natural and cultural wonders of Iowa. Greenways along rivers and lakes can also provide access for canoeists, kayakers, and other boaters.

OUTDOOR EDUCATION

A system of greenways can provide excellent outdoor classrooms where students can learn about native plant and animal species, ecosystems, and ecological processes. Greenways offer important opportunities for students to get involved in conserving natural and cultural resources. They can also serve as living laboratories for students, and as sites for studying historic, archaeological, and cultural resources.

PROTECTION FOR WORKING LANDSCAPES

Greenways can be used to protect working landscapes such as farms, pastures and prairies. Greenways along scenic byways can provide the traveling public with an aesthetic and interesting experience. Greenways using conservation easements can allow traditional land uses to continue, while providing corridors for the movement of wildlife and, where appropriate, people.

INFLUENCING URBAN FORM

Greenways can provide important growth management benefits. Protected lands around and within towns and cities can help shape urban form and mitigate urban sprawl. Greenways can help maintain

the delineation between urban and rural land uses. Also known as greenbelts, agricultural reserves, or buffer lands, privately and publicly owned greenways are valuable growth management tools.

PROVIDING ALTERNATIVE TRANSPORTATION

Greenways and trails can serve as alternative transportation routes for commuting to work or school, bicycling or walking to local businesses or restaurants, or sightseeing. These alternative forms of transportation, if made convenient by greenways, can help reduce air pollution and congestion.

— ***THE NEED FOR GREENWAYS IN IOWA***

During the last 150 years, the landscape of Iowa has changed dramatically. More than 90 percent of the state has been, in some way, modified by humans. Today, there are few old growth woodlands, and a mere fraction of the original Iowa prairie remains. The former travel routes and homes for a variety of mammals, birds, insects and microorganisms have been fragmented or severed by urban and agricultural landscapes.

Animals, hydrologic systems, and people all have a need for greenways. Animals need greenways for habitat, as well as to provide a safe transportation conduit from one space to another. Hydrological systems need greenways to distribute, recharge, and cleanse water supplies to local and regional watersheds. People need greenways as an element of a healthy lifestyle for present and future generations.



In Iowa, preservation of remaining natural areas as greenways, either with or without trails, can solidify and protect native species populations, stabilize hydrological processes, and offer scenic or recreational amenities to Iowa residents.

GREENWAYS IN IOWA

One of Iowa's greatest challenges is to build a sustainable future: a future in which the needs of the present generation are met in ways that expand rather than limit the resources available to future generations. Ultimately, caring for the environment is in the best interest of humans.

The conservation of greenways can begin to reestablish connections between environment, economy and society, thereby working toward a sustainable future in Iowa. Such a system of greenways has the potential not only to conserve green infrastructure, but also to provide economic benefits and to improve the quality of life for Iowa's citizens.

Some examples of greenways have already been implemented or planned in Iowa.

- ◆ The Central Iowa Greenways Framework Plan
- ◆ The Des Moines River Greenbelt in Polk County
- ◆ The Raccoon River Greenbelt in Dallas County
- ◆ The Skunk River Greenbelt in Story County
- ◆ The Indian Creek Greenbelt in Nevada
- ◆ The Clive Greenbelt
- ◆ The Iowa Quad Cities Metropolitan Area Comprehensive Greenway Plan
- ◆ The Jordan Creek Greenbelt in West Des Moines

These projects all follow river or stream corridors, most include trails for walking or bicycling, and all of them provide a diversity of plant communities to help protect the quality of the stream water, provide wildlife habitat and connect to cultural sites.

Iowa's system of greenways has created a new enthusiasm for the state's natural, recreational, cultural, and historic resources by connecting people to the land. Through a series of rural, suburban, and urban greenway experiences, children and adults are able to learn about Iowa's environment and the benefits of conservation.

— ***GREENWAYS AND IOWA TRAILS 2000***

As Iowa continues to grow and change, the importance of coordinating and balancing programs that protect the environment and guide development becomes increasingly evident. Some of the corridors shown on the Statewide Trails Vision Map (Figure 3-2) can be considered greenways. These corridors connect open spaces with some ecological value. The purpose of identifying these corridors is to increase recognition of them as existing or potential high-quality ecological corridors. With this recognition comes stewardship. Existing or potential greenway corridors are shown in Appendix A.

Trail implementation in these corridors should be considered carefully, so as to not adversely impact the existing ecosystem. Some trail modes may not be appropriate in greenways, particularly in sensitive riparian environments. Because a greenway's purpose is primarily ecological, trails within them should not adversely impact native ecosystems. The functional and scenic value of a greenway depends on the quality of its ecosystem, and trails should be selected and designed to complement that ecosystem.



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